

Application number 09/662,068
Amendment dated July 28, 2003
Reply to office action mailed February 27, 2003

PATENT

REMARKS/ARGUMENTS

After entry of this amendment, claims 53-54 and 56-70 will be pending in this application. Claim 55 has been cancelled without prejudice. Claims 68-70 have been added. Claim 62 has been amended to correct a typographical error. Support for the new and amended claims can be found in the specification. No new matter has been added.

Claims 53-54 and 56-67 stand rejected under 35 U.S.C. § 103(b) as being unpatentable over Zenk et al., U.S. Patent No. 4,590,586. Reconsideration of this rejection and allowance of the pending claims is respectfully requested.

Drawings

Formal drawings have been mailed July 28, 2003, under separate cover as United States express mail, label EV 322 215 960 US.

Claim 53

Claim 53 stands rejected under 35 U.S.C. § 103(b) as being unpatentable over Zenk et al. (Zenk). But Zenk does not show or suggest each and every element of this claim. For example, claim 53 recites "ordering the plurality of memory access requests, wherein a first request of the plurality of memory access requests to an available memory location precedes a second request of the plurality of memory access requests to an unavailable memory location." Zenk does not provide this feature.

The pending office action cites various section of Zenk as teaching this limitation. (See pending office action, page 2, paragraph 1.) But these passages relate to two different and separate functions performed by the apparatus of Figure 1 in Zenk, a priority function, and a "force clear" function.

The priority function in Zenk uses two levels of priority determination, the first involving an IOP priority block 52 and an IP priority block 68, the second involving a bank priority block 60a. (See Zenk, column 22, lines 9-39.)

The first level receives requests for access and provides outputs to the second level. Zenk does not provide much guidance on the first level, other than to say "Requests from

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IOP0 through IOP3 respectively received as signals IOP0 REQ through IOP3 REQ on cable 202a are selected amongst in IOP PRIORITY 52 to produce a single, highest priority one, request output on line 62." (See Zenk, column 19, lines 31-35.) Similar language appears describing the IP priority block 68, though one specific is given: "the IP3 request [is scheduled] before the maintenance exerciser request." (Zenk, column 13, lines 44-45.) No mention could be found that this level of selection is based on memory location availability as required by the claim.

The second level, bank priority, receives requests from different sources, and prioritizes according to the following "IOP requests being of higher priority than IP requests being of higher priority than SPO requests being of higher priority than SP1 requests." (Zenk, column 20, lines 64-66.) Again, no mention could be found that this second level of selection is based on memory location availability as required by the claim.

Memory location functionality is a factor in the second distinct function described in the cited passages of Zenk. Specifically, if the memory exerciser attempts to access a non-functional memory location, it does not receive a timely acknowledgement signal. Accordingly, a memory "time out" occurs, stalling further operations by other requesters. To avoid this, Zenk provides a "substitute" acknowledgement, or "forced clear," to the memory exerciser. (Zenk, column 8, lines 8-16, column 12, lines 34-69.) Thus, this second function appears to have nothing to do with request prioritization. Accordingly, Zenk does not provide the recited limitation as required by the claim.

For at least this reason, claim 53 should be allowed.

Other claims

Claims 56, 62, and 64 should be allowed for similar reasons as claim 53.

Claims 54, 57-61, 63, and 65-67 depend on claims 53, 56, 62, and 64, and should be allowed for at least the same reasons, and for the additional limitations they recite.

Claims 68-70 should be allowed since the cited reference does not show or suggest, for example, "ordering the plurality of memory access requests, wherein a first request of the plurality of memory access requests to a memory bank that is not currently being accessed

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precedes a second request of the plurality of memory access requests to a memory bank that is currently being accessed."

CONCLUSION

In view of the foregoing, Applicants believe all claims now pending in this application are in condition for allowance. The issuance of a formal notice of allowance at an early date is respectfully requested.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 650-752-2456.

Respectfully submitted,



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